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## The access to education in Romania. A regional study

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### Abstract

Education is fundamental both for individual destiny and the economic development of a country. The access to education is a serious problem facing the Romanian society, and especially the vulnerable groups.

The purpose of this research is to overview the education level in Romania during 1990-2010, and to identify the factors that influence the access to education of the most vulnerable ethnic group, the Roma. For this paper, we use the quantitative analysis. Using an econometric regression, we identify factors that influence access to education for Roma.

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*Keywords:* education; access to education; Roma ethnics.

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### 1. Introduction

Education plays a crucial role in training workers, skills development and labor market integration. Due to poverty, background, ethnicity etc., access to education is a serious problem for many Romanian children. According to data provided by the National Institute of Statistics, in 2010 the dropout rate tripled. More than 40000 children leave school each year, and most come from rural areas.

Although the number of children enrolled in education is relatively high, there are children, mostly from poor Roma communities, who do not attend school at all or drop out of school before they complete compulsory education (Eurochild, 2010).

Causes obstructing access to education are:

- Poverty. This is defined as deprivation and unmet needs, leading to social exclusion of poor population (Balancescu, 2002). A long-term relationship of mutual influence between poverty and education exists. Poverty may lead to lack of education, and lack of education may cause poverty. Romania remains one of the poorest countries in the European Union with a GDP per capita of only 41% of the EU27 average (Dan, 2012). The most vulnerable group in Romania is the Roma community. They, in most part, live in extreme poverty. According to the World Bank Report (2010), poverty among the Roma in Romania was about 67%.

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- Community. Rural areas are perhaps the most vulnerable because parents send their children to school according to the available resources. Their resources came from agriculture and other odd jobs, and most times these resources are insufficient compared to the needs.

- Prejudice. Stereotypes can be barriers for access to education.

## 2. Methodology

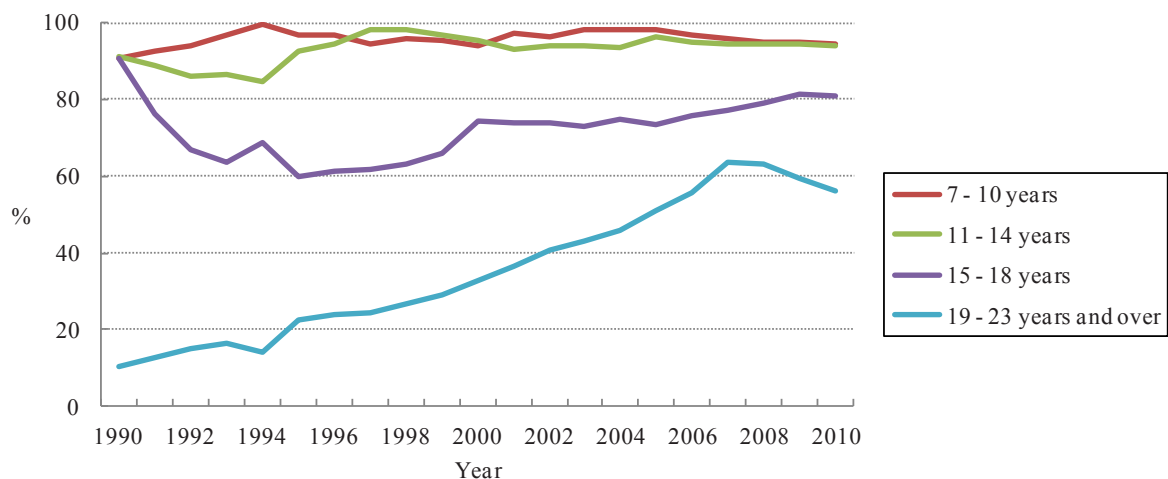
The purpose of this research is to present the education level in Romania during 1990-2010, and to identify the factors that influence the access to education of the most vulnerable ethnic group, the Roma. For this paper, we use the quantitative analysis. First we statistically analyze some indicators. Then, using data collected from the “Access to the labor market. A chance for you<sup>†</sup>” survey we estimate a regression equation. We used the SPSS software.

### 2.1. Statistical description

For the statistical description, we analyzed two indicators:

- Education enrollment during 1990-2010;  
- Number of persons enrolled in different education types during 1990-2008: primary, secondary, postsecondary and higher education;

Education enrollment ratio decreases with age. From age group 7-10 years, approximately 96% are enrolled in a school appropriate to their age. In contrast, 72% of those between 15 and 18 attend a high school, and only 35% of them continue their studies (Figure 1).



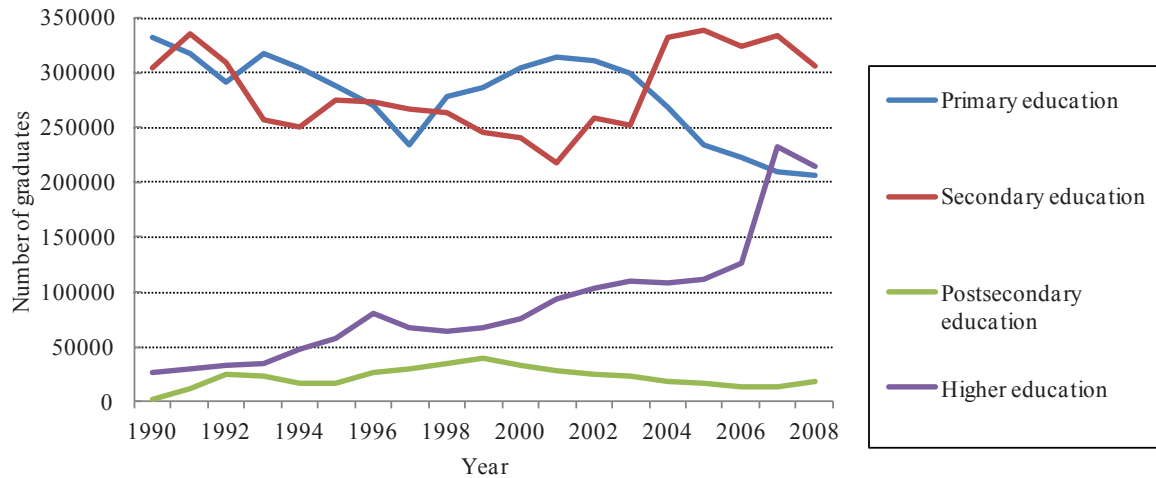
Source: Statistical Yearbook of Romania, 2012.

Figure 1. Education enrolment during 1990 - 2010

On average, 4% of those who are legally old enough to go to school are not enrolled, often because of poverty. The same goes with those aged between 11 and 14, where 7% are not enrolled, and the dropout percentage is rising. As a result, they will hardly ever integrate on the labor market.

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The second figure presents the evolution of education types. After 2004, because of low birth rate after the 90's, the number of graduates of primary education decreased. The enrollment in higher education increased over the analyzed period because of the easier access to this form of education as compared to the 90's.



Source: Statistical Yearbook of Romania, 2012.

Figure 2. Evolution of education types during 1990-2008

EUMAP (2007) report shows that there is a substantial discrepancy in the enrollment between the Roma and the other ethnics. Thus, the rate of enrolment for primary education is 76% for Roma while for the others it is 94%. The rate of enrolment for secondary education is 17% for Roma and 69% for the others. Finally, the higher education enrolment is 1% for Roma and 5% for the others.

At the regional level, most graduates of primary and secondary education are in North-East region, which also has the largest population. The postsecondary education saw a decline since 2000, with most graduates in South West region. For higher education, the number of graduates has increased during 1998-2008 in all regions. Most students are in Bucharest-Ilfov region because of the large number of universities. The number of years spent in school raised along with the financial resources (Nuta & Nuta, 2010). According to Pana (2012), such an increase in the number of students and graduates wouldn't have been possible without growing public spending.

A particular situation is represented by Roma children who are more likely to leave school than their peers from other ethnic groups (EUMAP, 2007). Four out of five uneducated children are Roma, and a significantly lower level of school attendance of Roma meets both primary and secondary level. According to the 2002 Census, the Roma ethnics spend, on average, 6.8 years in school, while the majority of the population spends 11.2 years.

At the regional level, most Roma graduates of primary and secondary education are in Central and South regions. One explanation might be the fact that the majority of Roma ethnics live in this two regions.

## 2.2. Econometric estimation

To analyze the access to education, we estimate a multiple linear regression which can be written as follows:

$$y_i = a + b_1x_{1i} + \dots + b_nx_{ni} + e_i$$

Where  $y_i$  represents the education level for the worker  $i$ ;  $x_i$  is the vector of characteristics associated with the worker  $i$ ;  $b$  is the vector of estimated coefficients. The following independent variables, along with their codes, are used:

- Gender: 0 – men, 1 - women;
- Edu\_0 (father's education): 0 - none, 1 - elementary school, 2- gymnasium, 3 - science high-school, 4 - humanistic school, 5 - Arts and Crafts high-school, 6 - postsecondary school, 7 - university, 8 - master, 9 - doctorate;

- *Edu\_1* (mother's education): 0 - none, 1 - elementary school, 2- gymnasium, 3 - science high-school, 4 - humanistic school, 5 - Arts and Crafts high-school, 6 - postsecondary school, 7 - university, 8 - master, 9 - doctorate;
- *Ocu\_0* (father's occupation): 0 - unemployed, 1 - employed;
- *Ocu\_1* (mother's occupation): 0 - unemployed, 1 - employed.

The dependent variable (*Edu*) codes are based on the graduated education type of the respondent: 0 - none, 1 - elementary school, 2- gymnasium, 3 - science high-school, 4 -humanistic school, 5 - Arts and Crafts high-school, 6 - postsecondary school, 7 - university, 8 - master, 9 - doctorate.

In order to have accurate results we calculated the correlation matrix for the exogenous variables. Table 1 shows that the independent variables are not correlated because the values obtained are less than 0.6 (Leech, Barrett & Morgan, 2011).

Table 1. Correlation matrix

	Edu_0	Edu_1	Ocu_0	Ocu_1	Gender
Edu_0	1	0.651	0.153	0.326	0.223
Edu_1	0.651	1	0.129	0.419	0.275
Ocu_0	0.153	0.129	1	0.198	0.008
Ocu_1	0.326	0.419	0.198	1	0.203
Gender	0.223	0.275	0.008	0.203	1

Source: Authors' calculations.

The second table shows the most significant model. It was computed after filling all the independent variables (parents' educations, parents' occupations and gender).

Table 2. Regression coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	<i>b</i>	std. error	beta		
Constant	1.174	0.299		3,923	0
Edu_0	0.085	0.056	0.083	1,534	0.016
Edu_1	0.506	0.063	0.457	8,057	0
Ocu_0	-0.023	0.114	-0.008	-0,200	0.041
Ocu_1	-0.036	0.142	-0.011	-0,250	0.503
Gender	0.317	0.138	0.099	2,307	0.022

Source: Authors' calculations.

In this model, the regression coefficient for *Ocu\_1* is not significant ( $p = 0.503$ ). Standardized coefficients (beta) allow highlighting the influence of independent variables on the dependent variable. Thus, the parents' educations and the gender have the greatest impact on the dependent variable. Parents' occupations negatively influence the education level of the children. The exogenous variable has a stronger effect on the endogenous variable, as beta coefficient departs from zero.

Based on table 2, we can write the regression equation as follows:

$Edu = 1.174 + 0.085Edu_0 + 0.506Edu_1 - 0.023Ocu_0 - 0.036Ocu_1 + 0.317Gender$ ,  $R^2 = 0.289$ , which is statistically significant ( $p < 0.05$ ).

Apparently, the education of parents, especially of the mother, and the respondent gender are most likely to influence the education level. The analyzed sample showed that men have lower education level than women. They dominate the primary education and the arts and crafts education, being oriented more towards practical activities. Unlike men, women dominate the high-school, post high-school and university education. This trend can be explained by measures taken at European level, aimed at reducing discrimination between women and men, especially for the studied ethnic group.

### 3. Conclusions

The access to education is a serious problem for the Romanian society, and especially the vulnerable groups. The education enrollment ratio decreases as age increases. On average, 4% of those who have the legal age do not attend school most often because of poverty.

Depending on the gender, enrolment based on the type of education is similar. The exception is for higher education, where only 33% of males continue their studies as compared to 37% for the females. Most graduates of primary and secondary education are located in the North East region, while Bucharest-Ilfov region has the highest number of students.

A particular situation regarding access to education is represented by Roma ethnics, who are more likely to leave school than their peers from another ethnic group. Thus, according to Census data, Romanian ethnics have mainly graduated secondary education, while the Roma ethnics have mainly graduated the primary education (36%), followed by the secondary (30%). Regionally, most Roma graduates of primary and secondary education are in Central and South region.

Based on the analyzed survey, we have identified factors that influence access to education for Roma: parental education and gender.

### Acknowledgements

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### References

- Balanescu, L. (2002). *Access to education for children in extreme poverty. Institute for Quality of Life*. Retrieved from <http://www.iccv.ro/sites/default/files/accesul-la-educatie-al-copiilor-aflati-in-saracie-extrema.pdf>.
- Dan, M.C. (2012). Innovative clusters: A solution for the economic development of Romania. *Theoretical and Applied Economics*, 9 (574), 5-16.
- EU Monitoring and Advocacy Program - EUMAP. (2007). *Equal Access to Quality Education for Roma*. Volume 1. Retrieved from [http://www.opensocietyfoundations.org/sites/default/files/2roma\\_20070329\\_0.pdf](http://www.opensocietyfoundations.org/sites/default/files/2roma_20070329_0.pdf)
- Eurochild. (2010). *Eurochild's Annual Report 2010*. Retrieved from [http://www.eurochild.org/fileadmin/Communications/10\\_Annual%20Reports/Eurochild%20Annual%20Report%202010.pdf](http://www.eurochild.org/fileadmin/Communications/10_Annual%20Reports/Eurochild%20Annual%20Report%202010.pdf)
- Leech, N.L., Barrett, K.C., & Morgan, G.A. (2011). *IBM SPSS for intermediate statistics: Use and interpretation*. (4<sup>th</sup> ed.). New York: Routledge.
- National Institute of Statistics. (2010). *Education*. Retrieved from [http://www.insse.ro/cms/files/Anuar%20statistic/08/08%20Educatie\\_ro.pdf](http://www.insse.ro/cms/files/Anuar%20statistic/08/08%20Educatie_ro.pdf)
- Nuta, A., & Nuta, F. (2010). Analysis of Budget and Fiscal Policy and its Implications in Terms of Integration into the European Union. *Acta Universitatis Danubius. Economica*, 6 (4), 117-124.
- Pana, M.C. (2012). Education and Crisis. *Theoretical and Applied Economics*, 5(570), 145-156.
- World Bank (2010). Economic costs of Roma exclusion. Retrieved from [http://siteresources.worldbank.org/EXTROMA/Resources/Economic\\_Costs\\_Roma\\_Exclusion\\_Note\\_Final.pdf](http://siteresources.worldbank.org/EXTROMA/Resources/Economic_Costs_Roma_Exclusion_Note_Final.pdf)